CLAIMS:

1. A device for forming an image which is composed of a plurality of sub-areas (T_1 to T_N), which device includes

- a detector which includes a plurality of sensor elements for generating image data,
- read-out units (V_1 to V_N) which are associated with the sub-areas (T_1 to T_N) of the image,
- an analysis unit (12) which is arranged to evaluate image data from adjoining image areas (S_{63} and S_{66}) of neighboring sub-areas (T_1 and T_2) and to generate correction data, and
- a correction unit (13) which is arranged to correct incorrect image data by means of correction data.

2. A device as claimed in claim 1,
characterized in that the detector includes a plurality of sensor elements which are arranged in rows and columns forming a matrix.

3. A device as claimed in claim 1,
characterized in that rows or columns, or parts thereof, constitute an image area, that a plurality of image areas constitute a sub-area, and that amplifiers are arranged so as to read out sub-areas.

4. A device as claimed in claim 1,
characterized in that
there is provided a memory (14) for storing the correction data.

5. A device as claimed in claim 1,
characterized in that the image data is applied to the analysis unit (12) at a reduced rate.

6. A device as claimed in claim 1,

characterized in that the analysis unit (12) is arranged to receive image data from adjoining columns of neighboring amplifiers, and

includes a histogram generator (15) for generating histograms of the image data received, and a summing unit (16) for forming cumulative histograms from the histograms, and an adaptation unit (17) for forming a functional dependency between the amplification characteristics of the amplifiers of neighboring columns and for generating correction data.

7. A device as claimed in claim 6,

characterized in that the histogram generator (15) is arranged to receive the image data and to generate histograms over a selectable period of time.

8. A deviceas claimed in claim 1

characterized in that

the analysis unit (12) includes

means (20) for forming an estimated value (SW_{65}) for the image value (GW_{65}) of a pixel (P_{65}) of a sub-area (T_2) to be corrected, the pixel (P_{65}) being situated at a boundary (G) with a neighboring sub-area (T_1), while utilizing an image value (GW_{64}) of the adjoining image area (S_{64}) of the neighboring sub-area (T_1), and

means (21, 22) for forming a correction value for the relevant image value (GW_{65}) in the sub-area (T_2) to be corrected by comparison of the actual image value SW_{65} of the pixel (P_{65}) with the estimated value (SW_{65}).

9. A device as claimed in claim 8,

characterized in that

the analysis unit includes means (20) for extrapolating across the boundary (G) the image values (GW_{63}, GW_{64}) of pixels (P_{63}, P_{64}) of an image area (S_{63}, S_{64}) of the neighboring sub-area (T1), adjoining the pixel (P_{65}) of the sub-area (T_2) to be corrected.

10. A method of forming an image which is composed of a plurality of sub-areas (T_1 to T_N) wherein a read-out unit (V_1 to V_N) is associated with each sub-area,

characterized in that

image data from adjoining image areas (S_{63} and S_{66}) of neighboring sub-areas (T_1 and T_2) is evaluated in order to mitigate differences between amplifier characteristics.

11. A method as claimed in claim 10, characterized in that an estimated value (SW_{65}) is determined for an image value (GW_{65}) of a pixel (P_{65}) of a sub-area (T_2) to be corrected, the pixel (P_{65}) being situated at a boundary (G) with a neighboring sub-area (T_1), while utilizing the image value (GW_{64}) of a pixel (P_{64}) of the adjoining image area (S_{64}) of the neighboring sub-area (T_1), a correction value for the relevant image value (GW_{65}) in the sub-area (T_2) to be corrected being determined by comparison of the actual image value (GW_{65}) of the pixel (P_{65}) and the estimated value (SW_{65}).

12. A method as claimed in claim 10, characterized in that a directly adjacent pixel of the neighboring sub-area is used as the estimated value of the image value.

13. A method as claimed in claim 10, characterized in that the image values (GW_{63}, GW_{64}) of pixels (P_{63}, P_{64}) of the adjoining image area (S_{63}, S_{64}) of the neighboring sub-area (T_1) are extrapolated across the boundary (G) in order to determine the estimated value (SW_{65}).

14. A method as claimed in claim 10, characterized in that a first correction value is formed for the image value (GW_{65}) of a pixel (P_{65}) of the sub-area (T_2) to be corrected and an estimated value (SW_{64}) for the neighboring pixel (P_{65}) is determined for a neighboring pixel (GW_{64}) of the neighboring sub-area (T1), directly adjoining this pixel (P_{65}) of the sub-area (T_2) to be corrected, while utilizing image values (GW_{65}, GW_{66}) of the sub-area (T_2) to be corrected, a second correction value being formed by comparison of the estimated value (GW_{64}) and the actual image value (GW_{64}) of the neighboring pixel (P_{64}), a common correction value for the relevant image value (GW_{65}) of the sub-area (T_2) to be corrected being formed from the first and the second correction value.

A

claim 10

15. A method as claimed in ~~one of the claims 10 to 14,~~ characterized in that

a common correction value for the relevant image value in the sub-area to be corrected is formed from the correction values for the same image values of different pixels of the sub-area to be corrected.

A 16. A method as claimed in claim 10 ~~one of the claims 10 to 15,~~
characterized in that
the correction values for the image values of the individual sub-areas (T_1 to T_N) are stored in an adaptation table (LUT) and are fetched from this table (LUT) for correction.

17. An X-ray examination apparatus which includes
an X-ray source for emitting X-rays and for forming an X-ray image,
an X-ray detector for forming an optical image from the X-ray image, which detector includes sensor elements arranged in rows and columns and at least two amplifiers (V_1 to V_N) for reading out detected image data, at least one amplifier being associated with each sub-area (T_1 to T_N) in order to read out detected image data,
characterized in that the apparatus includes
an analysis unit (12) for forming correction data on the basis of the evaluation of image data from adjoining image areas (S_{64} and S_{65}) of neighboring sub-areas (T_1 and T_2), and
a correction unit (13) for correcting the incorrect image data by means of the correction data.

18. A computer program for the correction of image data of an image which is composed of a plurality of sub-areas (T_1 to T_N), wherein a respective read-out unit (V_1 to V_N) is associated with sub-areas (T_1 to T_N) of the image and image data from image areas (S_{64} and S_{65}) of adjoining sub-areas (T_1 and T_2) of neighboring read-out units (V_1 and V_2) is evaluated by formation of histograms in order to generate correction data after integration of the histograms, which correction data is used to adapt the image data from one sub-area (T_2) to the amplifier characteristic of the read-out unit (V_1) which amplifies the adjoining sub-area (T_1).